

Table 16. Trace elements in filtered ground-water samples collected for the Monterey Bay and Salinas Valley Ground-Water Ambient Monitoring and Assessment (GAMA) study, California, July to October 2005.

[The five-digit number below the constituent name is the U.S. Geological Survey parameter code used to uniquely identify a specific constituent or property; MSMB, Monterey Bay study area well; MSMBFP, Monterey Bay study area flow-path well; MSMBMW, Monterey Bay study area monitoring well; MSPR, Paso Robles study area well; MSSC, Santa Cruz study area well; MSSV, Salinas Valley study area well; HAL-US, U.S. Environmental Protection Agency Lifetime Health Advisory; MCL-CA, California Department of Health Services maximum contaminant level; MCL-US, U.S. Environmental Protection Agency maximum contaminant level; NL, California notification level; SMCL-US, U.S. Environmental Protection Agency secondary maximum contaminant level; TT-US, U.S. Environmental Protection Agency treatment technique; E, estimated value; LRL, laboratory reporting level; na, not available; V or VE, value censored due to blank contamination and not included in ground-water quality analyses; µg/L, micrograms per liter; —, not detected; *, value exceeds regulatory threshold]

| GAMA identification no. | Aluminum (µg/L) (01106) | Antimony (µg/L) (01095) | Arsenic (µg/L) (01000) | Barium (µg/L) (01005) | Beryllium (µg/L) (01010) | Boron (µg/L) (01020) | Cadmium (µg/L) (01025) | Chromium (µg/L) (01030) | Cobalt (µg/L) (01035) |
|-------------------------|----------------------------|----------------------------|---------------------------|--------------------------|-----------------------------|-------------------------|---------------------------|----------------------------|--------------------------|
| Threshold type | MCL-US | MCL-US | MCL-US | MCL-CA | MCL-US | NL | MCL-US | MCL-CA | na |
| Threshold (µg/L) | 1,000 | 6 | 10 | 1,000 | 4 | 1,000 | 5 | 50 | na |
| [LRL] | [2] | [0.2] | [0.2] | [0.2] | [0.06] | [8] | [0.04] | [0.8] | [0.014] |
| MSMB-04 | E1 | — | — | 4 | — | 88 | — | — | 0.073 |
| MSMB-09 | E0.9 | — | 0.6 | 26 | — | 64 | — | 14.2 | 0.059 |
| MSMB-12 | 7 | — | 2.3 | 23 | — | 131 | — | E0.04 | — |
| MSMB-18 | — | — | 1.4 | 51 | — | 32 | E0.03 | 13.1 | 0.059 |
| MSMB-20 | — | — | 0.7 | 59 | — | 162 | — | 7.4 | 0.126 |
| MSMB-22 | E1 | — | 0.56 | 96 | — | 463 | E0.02 | 0.07 | 0.161 |
| MSMB-29 | E1 | — | 2.6 | 46 | — | 656 | 0.37 | E0.6 | 0.299 |
| MSMB-30 | E0.9 | E0.11 | 3.3 | 89 | — | 46 | 0.04 | 3.5 | 0.183 |
| MSMB-33 | — | 0.39 | 7.3 | 87 | — | 168 | 0.07 | 0.2 | 0.127 |
| MSMB-35 | E1 | E0.14 | V0.5 | 191 | 1.28 | 427 | — | VE0.03 | 1.2 |
| MSMB-37 | VE1 | E0.13 | 5.5 | 37 | — | 144 | E0.02 | 0.13 | 0.094 |
| MSMB-40 | — | — | 1.0 | 72 | — | 146 | — | 3.5 | 0.101 |
| MSMB-44 | — | — | 1.2 | 48 | — | 325 | 0.14 | 6.6 | E0.030 |
| MSMB-45 | — | — | 0.8 | 62 | — | 30 | 0.07 | — | 0.267 |
| MSMB-47 | — | — | 1.9 | 55 | — | 84 | E0.03 | 6.3 | 0.061 |
| MSMBFP-02 | — | — | 1.6 | 46 | — | 252 | 0.12 | 2.8 | 0.282 |
| MSMBFP-03 | — | — | 1.4 | 128 | — | 87 | 0.18 | 5.4 | 0.125 |
| MSMBMW-01 | 10 | E0.17 | 3.2 | 78 | 0.06 | 129 | E0.03 | 6.5 | 0.180 |
| MSMBMW-02 | 20 | E0.17 | 2.1 | 86 | — | 118 | E0.03 | 7.3 | 0.050 |
| MSMBMW-03 | 3 | E0.17 | 2.7 | 71 | — | 49 | 0.04 | 4.2 | 0.180 |
| MSPR-01 | — | — | 1.3 | 55 | — | 76 | 0.32 | — | 0.221 |
| MSPR-08 | — | E0.12 | 3.6 | 73 | — | 488 | 0.06 | 1.1 | 0.128 |
| MSPR-10 | — | — | 1.3 | 16 | — | 753 | 0.07 | — | 0.390 |
| MSSC-04 | — | — | — | 24 | — | 151 | — | — | 0.144 |
| MSSC-06 | — | — | 0.2 | 22 | — | 47 | — | — | 0.179 |
| MSSC-07 | — | — | — | 10 | — | 288 | — | — | 0.094 |
| MSSC-08 | E1 | — | — | 9.0 | — | 83 | — | — | 0.065 |
| MSSV-01 | — | — | 4.8 | 13 | — | 285 | — | — | 0.192 |
| MSSV-02 | — | E0.11 | 1.3 | 41 | — | 80 | 0.11 | E0.4 | 0.077 |
| MSSV-03 | — | — | 2.6 | 55 | — | 240 | 0.04 | E0.03 | 0.219 |
| MSSV-07 | E0.8 | — | 1.4 | 36 | — | 153 | 0.06 | E0.7 | 0.112 |
| MSSV-11 | E0.9 | — | 0.8 | 54 | — | 34 | 0.13 | 1.2 | 0.082 |
| MSSV-18 | E1 | — | 1.6 | 108 | — | 330 | E0.03 | 3.7 | 0.106 |
| MSSV-19 | E0.8 | — | 1.8 | 40 | — | 208 | 0.05 | 4.7 | 0.108 |

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| GAMA identification no. | Copper (µg/L) (01040) | Iron (µg/L) (01046) | Lead (µg/L) (01049) | Lithium (µg/L) (01130) | Manganese (µg/L) (01056) | Mercury (µg/L) (71890) | Molybdenum (µg/L) (01060) | Nickel (µg/L) (01065) | Selenium (µg/L) (01145) |
|-------------------------|-----------------------|---------------------|---------------------|------------------------|--------------------------|------------------------|---------------------------|-----------------------|-------------------------|
| Threshold type | TT-US | SMCL-US | NL | na | SMCL-US | MCL-US | HAL-US | MCL-CA | MCL-US |
| Threshold (µg/L) | 1,300 | 300 | 15 | na | 50 | 2 | 40 | 100 | 50 |
| [LRL] | [0.4] | [6] | [0.08] | [0.6] | [0.2] | [0.01] | [0.4] | [0.06] | [0.4] |
| MSMB-04 | 4.4 | 48 | 0.55 | 10.9 | 13.3 | — | 2.1 | 1.22 | — |
| MSMB-09 | E0.4 | 18 | 0.25 | 13.2 | 0.6 | — | 5.0 | 1.80 | 0.9 |
| MSMB-12 | VE0.3 | 11 | — | 45 | 5.5 | — | 4.5 | 0.42 | E0.1 |
| MSMB-18 | 0.7 | — | 0.14 | 16.1 | — | — | 0.9 | 1.35 | 0.9 |
| MSMB-20 | 0.8 | — | 0.85 | 18.2 | 1.6 | — | 2.3 | 2.68 | 2.0 |
| MSMB-22 | — | 90 | — | 12.8 | *60.8 | — | 4.2 | 1.41 | — |
| MSMB-29 | 3.9 | VE4.0 | 3.60 | 19.4 | 3.2 | — | 36.7 | 4.74 | 9.8 |
| MSMB-30 | 4.0 | 9.0 | 0.94 | 29 | 1.3 | E.010 | 2.7 | 4.26 | 4.8 |
| MSMB-33 | VE0.2 | 87 | 0.46 | 5.8 | *208 | — | *42.6 | 0.87 | 0.2 |
| MSMB-35 | 2.0 | 35 | E0.15 | 19.3 | *2,410 | — | 3.7 | 7.24 | 0.1 |
| MSMB-37 | V1.9 | VE6.0 | 0.38 | 56.1 | VE0.1 | — | 6.3 | 1.67 | — |
| MSMB-40 | 1.5 | — | 0.82 | 15.6 | E0.1 | — | 3.6 | 1.47 | 0.6 |
| MSMB-44 | 0.68 | E4.0 | 0.59 | 35 | 0.6 | — | 8.2 | 0.76 | 6.2 |
| MSMB-45 | 0.6 | *2,830 | 0.14 | 3.4 | *170 | — | 3.7 | 2.74 | 0.5 |
| MSMB-47 | 0.6 | 10 | 1.99 | 16.6 | 0.8 | — | 6.8 | 1.49 | 1.4 |
| MSMBFP-02 | 2.2 | VE3.0 | 0.65 | 30.8 | — | — | 4.6 | 5.49 | 2.4 |
| MSMBFP-03 | 2.3 | 23 | 0.43 | 17.2 | 0.3 | .050 | 1.8 | 2.99 | 6.2 |
| MSMBMW-01 | 0.6 | — | — | 25.8 | 0.4 | — | 10.4 | 1.42 | 0.8 |
| MSMBMW-02 | 0.42 | — | — | 43.3 | 0.8 | — | 11.5 | 2.10 | 1.0 |
| MSMBMW-03 | 0.45 | — | — | 28.4 | 1 | — | 4.9 | 4.20 | 1.9 |
| MSPR-01 | 2.0 | E4.0 | 3.52 | 7.9 | 0.2 | — | 6.2 | 4.67 | 7.3 |
| MSPR-08 | 1.9 | 10 | 0.09 | 86.1 | 1 | .030 | 17.8 | 2.44 | 2.7 |
| MSPR-10 | 5.4 | 185 | — | 110 | *78.4 | — | 18.2 | 5.20 | 17.6 |
| MSSC-04 | 0.7 | 37 | — | 71 | 13.8 | — | 2.1 | 4.04 | 0.4 |
| MSSC-06 | 0.7 | *657 | 0.09 | 19.1 | *197 | — | 2.8 | 3.44 | 0.7 |
| MSSC-07 | E0.3 | 92 | E0.06 | 45.7 | 38.8 | — | 2.9 | 1.84 | — |
| MSSC-08 | VE0.2 | 218 | 0.38 | 35.2 | *63 | — | 2.3 | 0.80 | — |
| MSSV-01 | 1.1 | *508 | 6.62 | 95.6 | 34.5 | — | 18.2 | 4.17 | 0.4 |
| MSSV-02 | 0.4 | — | 0.33 | 8.8 | 5.1 | — | 4.8 | 1.73 | 0.4 |
| MSSV-03 | V1.5 | 33 | 0.17 | 25.5 | *536 | — | 6.3 | 3.52 | 0.4 |
| MSSV-07 | 1.2 | 6.0 | 4.03 | 16.5 | E0.2 | — | 4.0 | 0.48 | 1.2 |
| MSSV-11 | 0.6 | — | 0.17 | 9.4 | E0.2 | — | 6.2 | 2.20 | 0.9 |
| MSSV-18 | 0.8 | 24 | 0.29 | 33.7 | 19.3 | — | 11.5 | 1.03 | 1.6 |
| MSSV-19 | 1.0 | 7.0 | 0.15 | 23.5 | 2.7 | — | 9.5 | 1.93 | 2.0 |

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| GAMA identification no. | Silver (µg/L) (01075) | Strontium (µg/L) (01080) | Thallium (µg/L) (01057) | Tungsten (µg/L) (01155) | Uranium (µg/L) (22703) | Vanadium (µg/L) (01085) | Zinc (µg/L) (01090) |
|-------------------------|-----------------------|--------------------------|-------------------------|-------------------------|------------------------|-------------------------|---------------------|
| Threshold type | na | HAL-US | MCL-US | na | MCL-US | NL | SMCL-US |
| Threshold (µg/L) | na | 4,000 | 2 | na | 30 | 50 | 5,000 |
| [LRL] | [0.2] | [0.4] | [0.04] | [0.5] | [0.04] | [0.1] | [0.04] |
| MSMB-04 | — | 276 | — | — | 0.74 | 0.3 | 3.0 |
| MSMB-09 | — | 248 | — | — | 0.50 | 3.7 | 6.5 |
| MSMB-12 | — | 284 | — | — | E0.03 | — | E0.38 |
| MSMB-18 | — | 239 | — | — | 0.91 | 12.6 | 0.8 |
| MSMB-20 | — | 504 | — | — | 1.72 | 4.4 | 1.4 |
| MSMB-22 | — | 698 | — | — | 2.38 | 4.8 | E0.59 |
| MSMB-29 | — | 785 | — | — | 17.20 | 7.3 | 8.0 |
| MSMB-30 | — | 494 | E0.02 | — | 5.94 | 7.1 | 4.5 |
| MSMB-33 | — | 245 | — | — | 0.21 | 1.0 | 4.0 |
| MSMB-35 | — | 699 | — | — | 1.35 | 3.0 | 6.6 |
| MSMB-37 | — | 374 | — | — | 1.79 | 11.1 | 3.2 |
| MSMB-40 | — | 326 | — | — | 4.80 | 16.7 | 8.2 |
| MSMB-44 | — | 996 | — | — | 18.50 | 4.9 | 3.9 |
| MSMB-45 | — | 255 | — | — | 0.20 | 0.8 | 1.8 |
| MSMB-47 | — | 395 | — | — | 3.00 | 12.8 | 2.5 |
| MSMBFP-02 | — | 696 | — | — | 13.10 | 9.7 | 4.3 |
| MSMBFP-03 | — | 671 | — | — | 9.12 | 6.2 | 2.9 |
| MSMBMW-01 | — | 401 | — | 0.9 | 3.50 | 18.9 | E0.4 |
| MSMBMW-02 | — | 332 | — | 0.4 | 2.21 | 12.4 | — |
| MSMBMW-03 | — | 260 | — | 0.5 | 2.21 | 3.9 | 0.97 |
| MSPR-01 | — | 455 | 0.04 | — | 2.58 | 2.4 | 3.1 |
| MSPR-08 | — | 1,330 | — | — | 18.30 | 20.5 | 9.4 |
| MSPR-10 | — | 1,790 | — | — | 28.90 | 6.8 | 3.3 |
| MSSC-04 | — | 900 | — | — | — | 0.3 | 2.6 |
| MSSC-06 | — | 226 | — | — | E0.03 | — | 10.0 |
| MSSC-07 | — | 467 | — | — | — | 0.4 | 1.7 |
| MSSC-08 | — | 281 | — | 0.2 | — | — | 3.0 |
| MSSV-01 | — | 1,530 | 0.05 | — | 0.37 | E0.1 | 1,470 |
| MSSV-02 | — | 326 | — | — | 1.42 | 3.4 | 1.0 |
| MSSV-03 | — | 688 | — | — | 3.00 | 0.8 | 4.6 |
| MSSV-07 | — | 344 | — | — | 1.09 | 3.7 | 1.7 |
| MSSV-11 | — | 293 | — | — | 4.08 | 3.7 | E0.5 |
| MSSV-18 | — | 572 | — | — | 2.83 | 9.4 | 1.4 |
| MSSV-19 | — | 436 | — | — | 4.13 | 9.6 | 3.7 |